

AIRS Data Support at GES DAAC

AIRS Data Support Home Page

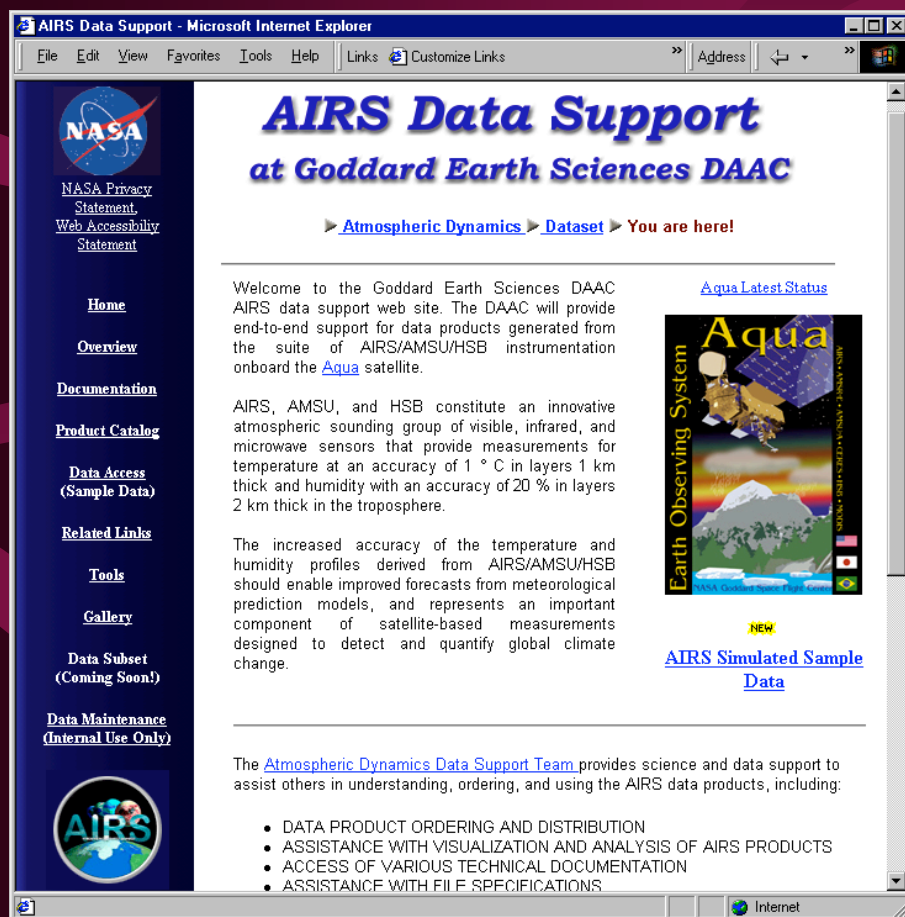
GES DAAC Search and Order Interface for AIRS Data

**AIRS Data Support Team (atmdyn-dst@daac.gsfc.nasa.gov):
Sunmi Cho (Presenter),
A.K Sharma, Jianchun Qin, Jason Li**

AIRS Data Support Home Page at GES DAAC

<http://daac.gsfc.nasa.gov/atmodyn/airs/>

Home



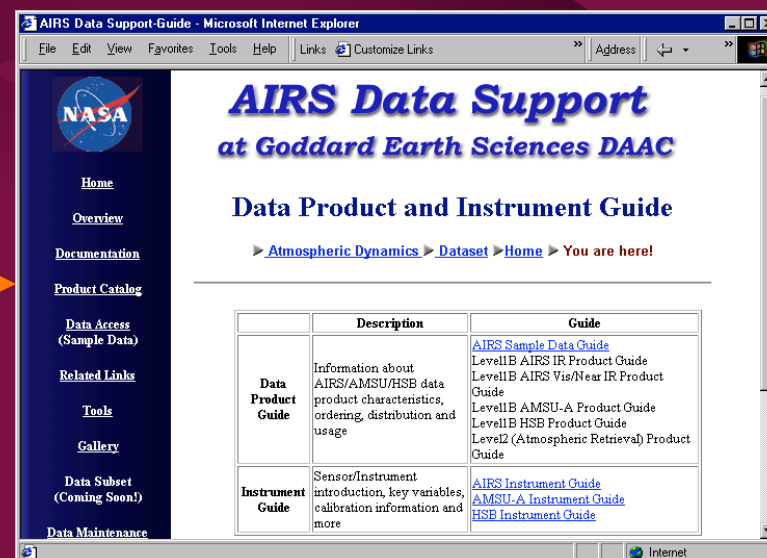
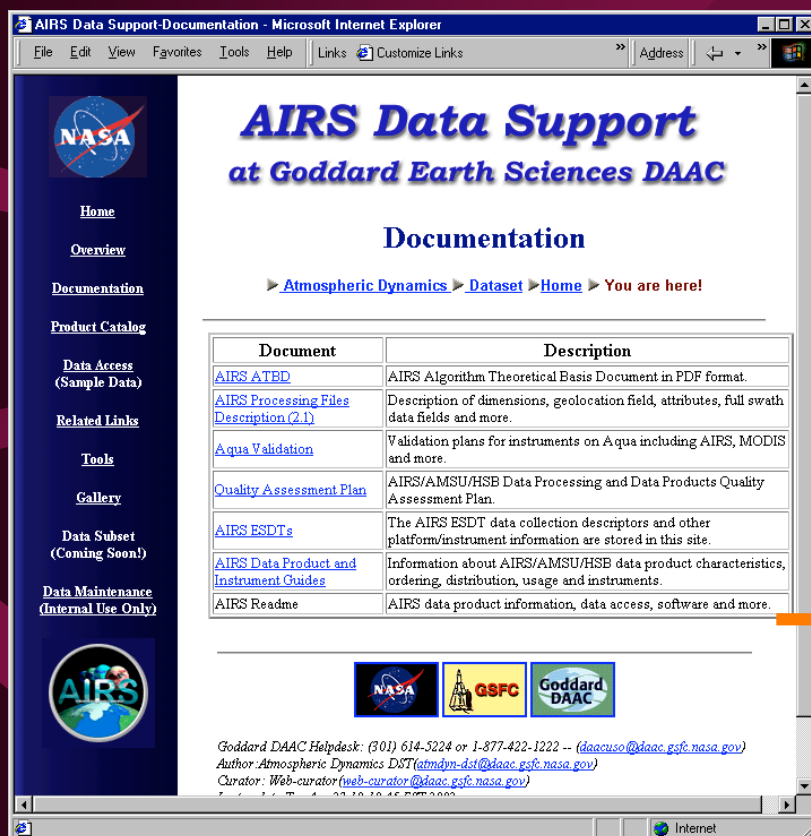
AIRS Data Support Home page at GES DAAC is user-friendly navigational web site with information on AIRS data product and services provided by AIRS data support team. It provides online documentation, product catalog, links to data access interfaces, information on various tools to read and visualize AIRS data, images, and online data analysis tools.

AIRS Simulated Sample data has been released to public users via this post-launch version AIRS Data Support page on April 30, 2002.

AIRS Data Support Home Page at GES DAAC

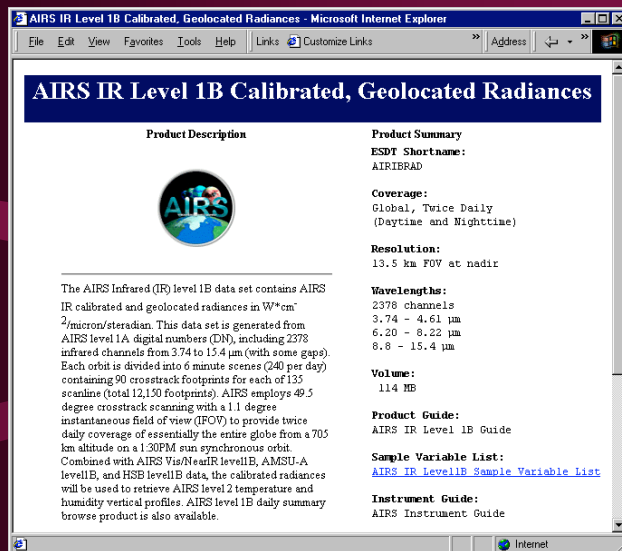
Documentation

Users can access ATBD, File specification, data product guides and instrument guides, and other AIRS data related online documents.



AIRS Data Support Home Page

Product Catalog



AIRS IR Level 1B Calibrated, Geolocated Radiances

Product Description

The AIRS Infrared (IR) level 1B data set contains AIRS IR calibrated and geolocated radiances in $W \cdot m^{-2} \cdot \mu m^{-1}$. This data set is generated from AIRS level 1A digital numbers (DN), including 2378 infrared channels from 3.74 to 15.4 μm (with some gaps). Each orbit is divided into 6 minute scenes (240 per day) containing 90 cross-track footprints for each of 135 scanlines (total 12,150 footprints). AIRS employs 49.5 degree cross-track scanning with a 1.1 degree instantaneous field of view (IFOV) to provide twice daily coverage of essentially the entire globe from a 705 km altitude on a 1:30PM sun synchronous orbit. Combined with AIRS Vis/NearIR level 1B, AMSU-A level 1B, and HSB level 1B data, the calibrated radiances will be used to retrieve AIRS level 2 temperature and humidity vertical profiles. AIRS level 1B daily summary browse product is also available.

Product Summary

ESDT Shortname:
AIRIBRAD

Coverage:
Global, Twice Daily
(Daytime and Nighttime)

Resolution:
13.5 km FOV at nadir

Wavelengths:
2378 channels
3.74 - 4.61 μm
6.20 - 8.22 μm
8.8 - 15.4 μm

Volume:
114 MB

Product Guide:
AIRS IR Level 1B Guide

Sample Variable List:
[AIRS IR Level 1B Sample Variable List](#)

Instrument Guide:
AIRS Instrument Guide



AIRS Data Support-Product Catalog - Microsoft Internet Explorer

Product Catalog

► [Atmospheric Dynamics](#) ► [Dataset](#) ► [Home](#) ► **You are here!**

Click the links in **Data Product** column to see detail description of each data product.

Note: The Product listed below are those which the AIRS Science Team plans to make publicly available. For information pertaining to products not listed, please contact Atmospheric Dynamics DST (atmdyn-dst@daac.gsfc.nasa.gov).

Level 1B Products

Data Product	Description	Average Item Size(Mb)	ESDT short name
L1B-AIRS-Rad	AIRS IR geolocated radiances	114.0	AIRIBRAD
L1B-VIS-Rad	AIRS Vis/Near IR geolocated radiances	16.0	AIRVBRAD
L1B-AMSU-Rad	AMSU-A1 & AMSU-A2 combined, geolocated & calibrated brightness temperatures	0.4	AIRABRAD
L1B-HSB-Rad	HSB geolocated & calibrated brightness temperatures	1.4	AIRHBRAD
L1B-AIR-Browse	AIRS Daily Summary Browse	0.4	AIRIBDBR
L1B-AMSU-Browse	AMSU-A Daily Summary Browse	0.6	AIRABDBR
L1B-HSB-Browse	HSB Daily Summary Browse	0.3	AIRHDBR

Level 2 Products

Data Product	Description	Average Item Size(Mb)	Vertical Resolution	ESDT Short Name
--------------	-------------	-----------------------	---------------------	-----------------

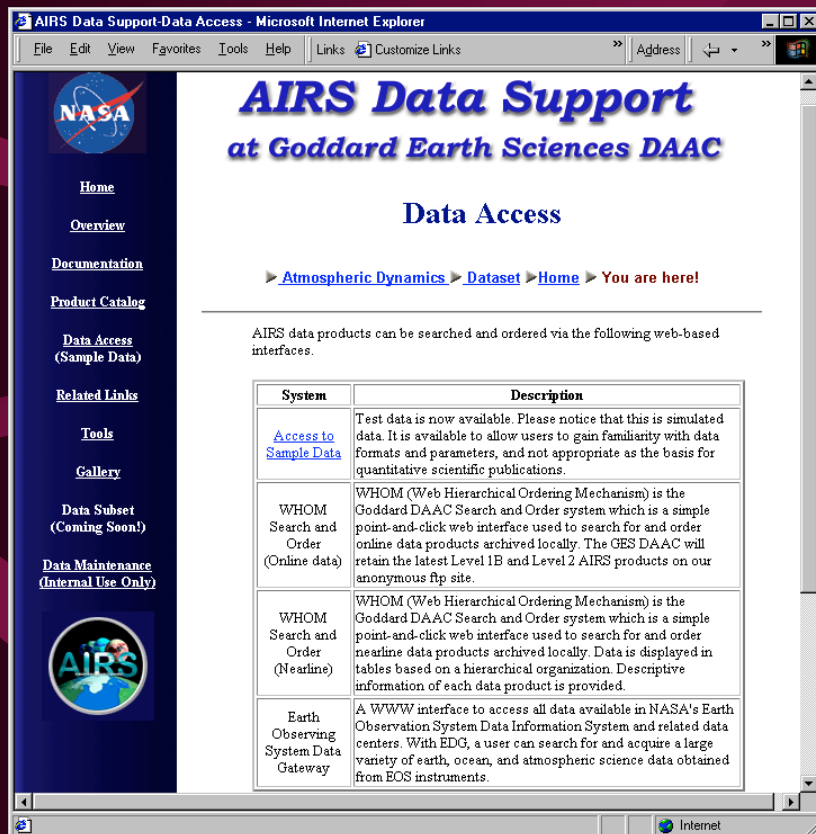
Navigation Menu:

- Home
- Overview
- Documentation
- Product Catalog
- Data Access (Sample Data)
- Related Links
- Tools
- Gallery
- (Coming Soon!)
- Data Maintenance (Internal Use Only)

The links in Data Product column lead to detail information on each product, such as, product description, temporal and spatial coverage, file size, links to related documents and more.

AIRS Data Support Home Page

Data Access

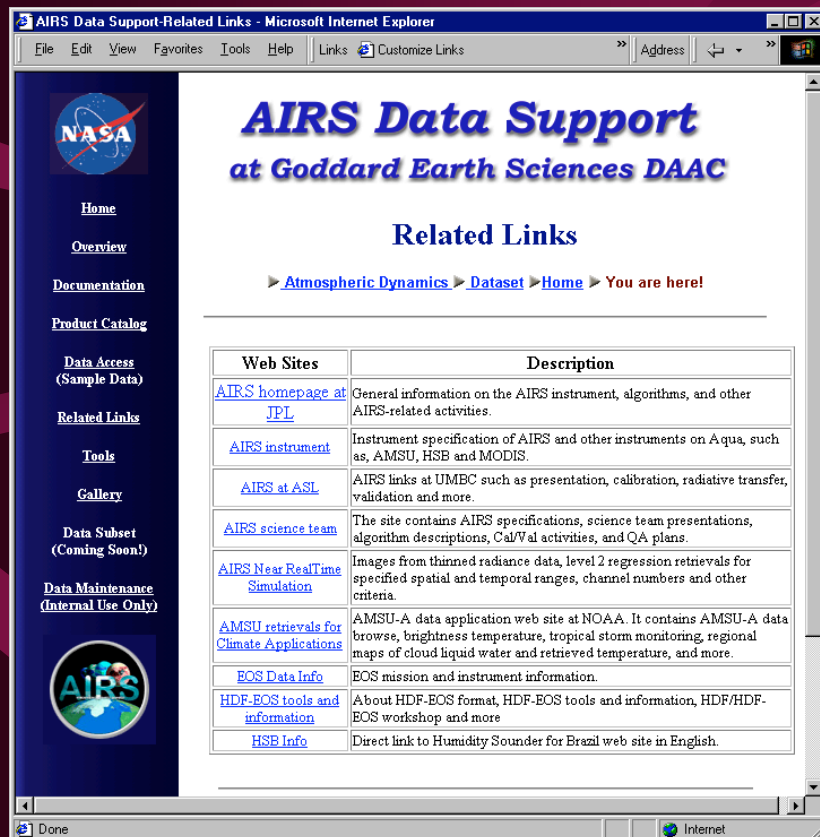


AIRS data can be accessed via GES DAAC local search and order interface, WHOM (Web Hierarchical Ordering Mechanism) and EOS Data Gateway.

The GES DAAC will retain the latest Level 1B and Level 2 AIRS products on our anonymous ftp sites and released via through WHOM together with Nearline data.

AIRS Data Support Home Page

Related Links



One can find various AIRS data related information navigating web sites of

AIRS home page at JPL
AIRS science team
AIRS instrument
AIRS near-Real Time simulation
AMSU-A data application
HDF-EOS information
and more.

AIRS Data Support Home Page

Sample Data Access

AIRS Simulated Sample data can be downloaded via anonymous ftp and http. Online data guide document and product descriptions are also provided.

AIRS Data Support
at Goddard Earth Sciences DAAC

Sample Data

► [Atmospheric Dynamics](#) ► [Dataset](#) ► [Home](#) ► You are here!

Click Download in Sample Data column to access data and metadata file.

- [AIRS Sample Data Guide Document](#)
- [HDF-EOS Tools and Information](#)
- [Processing File Description](#)

Data Product	Description	Begin Date	End Date	Average Item Size (Mb)	Sample Data
L1B-AIRS-Rad	AIRS IR geolocated radiances	2000-12-14 00:11:26	2000-12-15 00:05:26	114	Download
L1B-VIS-Rad	AIRS Vis/Near IR geolocated Radiances	2000-12-14 00:11:26	2000-12-15 00:05:26	16	Download
L1B-AMSU-Rad	AMSU-A1 & AMSU-A2 combined, geolocated & calibrated brightness temperature in Kelvin	2000-12-14 00:11:26	2000-12-15 00:05:26	0.4	Download
L1B-HSB-Rad	HSB geolocated & calibrated brightness temperature in Kelvin	2000-12-14 00:11:26	2000-12-15 00:05:26	1.44	Download
L1B-AIR-Browse	AIRS Daily Summary Browse	2000-12-14 00:11:26	2000-12-15 00:05:26	0.4	Download

AIRS Golden Day Data Set (December 14, 2000)

ESDT: AIRIBRAD

DayNightFlag: Day Time Granules

Anonymous FTP Server: acdisz.gsfc.nasa.gov

Directory Path: /ftp/data/airs_data/1/AIRIBRAD/dayTime_granules/

Granule Count = 107

Typical File Size per Granule = 11494 Mbytes

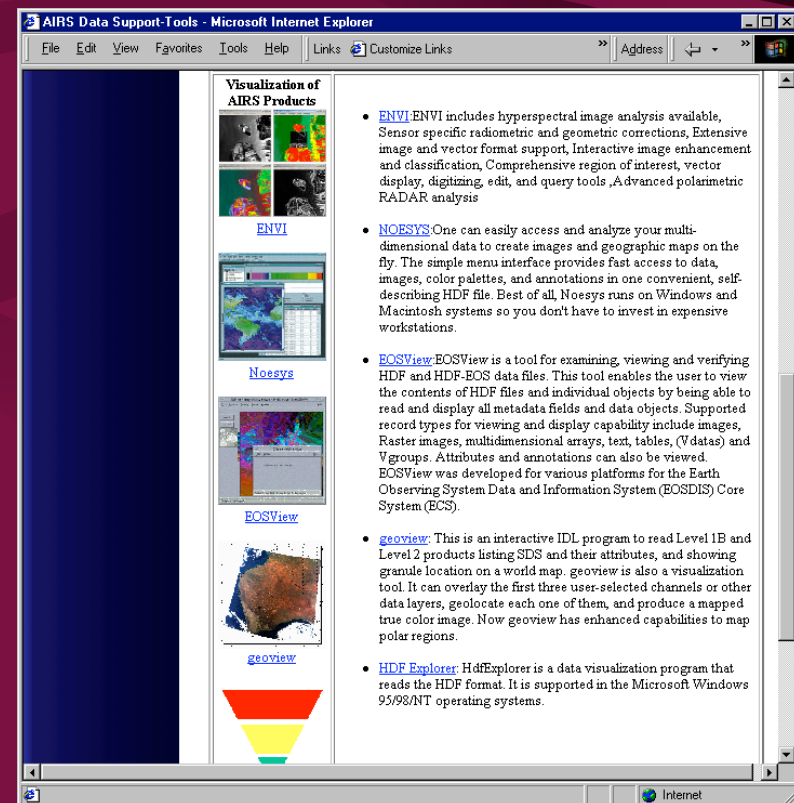
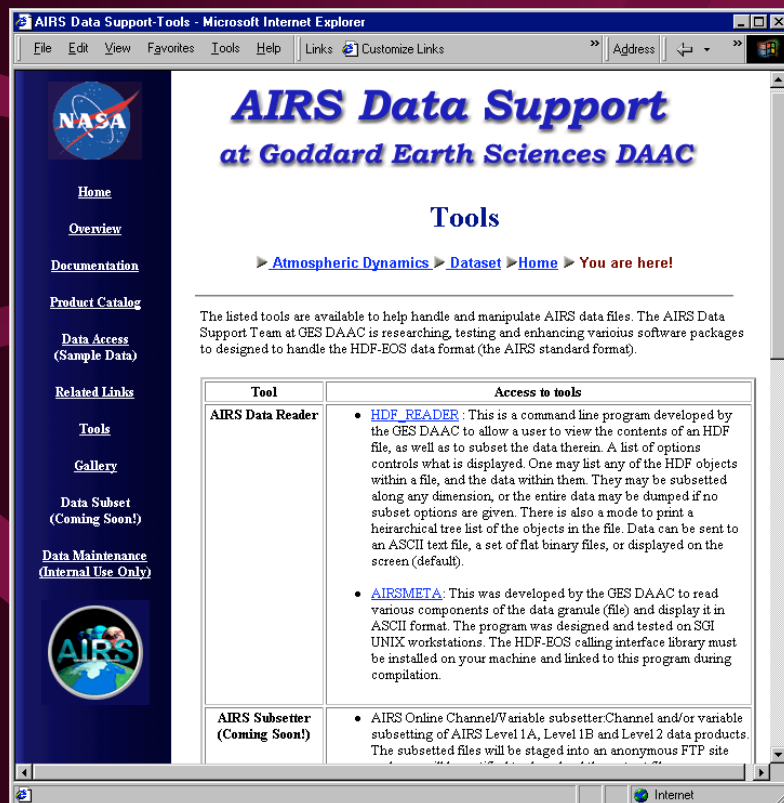
Note: to save a file to your hard drive using a web browser, right-mouse-click on the link. Then select appropriate options.

Granule ID	Filenames	URL Links
001	AIRS 2000.12.14.001.L1B.AIRS_Rad.v2.2.3.10.v2_2_3_test.T02090121638	HDF data file meta data text file
002	AIRS 2000.12.14.002.L1B.AIRS_Rad.v2.2.3.10.v2_2_3_test.T02090121805	HDF data file meta data text file
003	AIRS 2000.12.14.003.L1B.AIRS_Rad.v2.2.3.10.v2_2_3_test.T02090121936	HDF data file meta data text file
004	AIRS 2000.12.14.004.L1B.AIRS_Rad.v2.2.3.10.v2_2_3_test.T02090122102	HDF data file meta data text file
015	AIRS 2000.12.14.015.L1B.AIRS_Rad.v2.2.3.10.v2_2_3_test.T02090123719	HDF data file meta data text file
016	AIRS 2000.12.14.016.L1B.AIRS_Rad.v2.2.3.10.v2_2_3_test.T02090123853	HDF data file meta data text file
017	AIRS 2000.12.14.017.L1B.AIRS_Rad.v2.2.3.10.v2_2_3_test.T02090124021	HDF data file meta data text file

AIRS Data Support Home Page

Tools

The AIRS Data Support Team at GES DAAC is researching, testing and enhancing various software packages to designed to handle the HDF-EOS data format (the AIRS standard format).



AIRS Data Support Home Page

Gallery

AIRS Data Support-Images - Microsoft Internet Explorer



File Edit View Favorites Tools Help Links Customize Links Address

AIRS Data Support
at Goddard Earth Sciences DAAC

Gallery

► [Atmospheric Dynamics](#) ► [Dataset](#) ► [Home](#) ► [You are here!](#)

Image	Description
Images from AIRS Simulated Data	Images generated from AIRS simulated data using the cloud clearing methodology.
AMSU-A Retrievals for Climate Application	AMSU-A data application web site at NOAA. It contains AMSU-A data browse, brightness temperature, tropical storm monitoring, regional maps of cloud liquid water and retrieved temperature, and more.
AIRS Near RealTime Simulation	One can display image from thinned radiance data, level 2 regression retrievals for specified spatial and temporal range, channel number and other criteria.

Goddard DAAC Helpdesk: (301) 614-5224 or 1-877-422-1222 -- (daacuso@daac.gsfc.nasa.gov)
Author: Atmospheric Dynamics DST (atmdyn-dst@daac.gsfc.nasa.gov)
Curator: Web-curator (web-curator@daac.gsfc.nasa.gov)
Last update: Tue Apr 23 10:18:45 EST 2002
Responsible NASA Official: Steve Kempler, DAAC Manager (kempler@daac.gsfc.nasa.gov)

Internet

AIRS Data Support-Image - Microsoft Internet Explorer


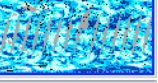

File Edit View Favorites Tools Help Links Customize Links Address


Images from AIRS Simulated Data

► [Atmospheric Dynamics](#) ► [Dataset](#) ► [Home](#) ► [You are here!](#)

The cloud clearing methodology requires no knowledge of the spectral properties of the clouds. The basic retrieval methodology is general and extracts the maximum information from the radiances, consistent with the channel noise covariance matrix. The retrieval methodology minimizes the dependence of the solution on the first guess field and the first guess error characteristics. Results are shown for AIRS Science Team simulation studies with multiple cloud formations. These simulation studies imply that clear column radiances can be reconstructed under partial cloud cover with an accuracy comparable to single spot channel noise in the temperature and water vapor sounding regions, temperature soundings can be produced under partial cloud cover with RMS errors on the order of, or better than, 1 degree K in 1 km thick layer from the surface to 700 mb, 1 km layers from 700 mb to 300 mb, 3 km layers from 300 to 30 mb, and 5 km layers from 30 to 1 mb, and moisture profiles can be obtained with an accuracy better than 20% absolute errors in 1 km layers from the surface to nearly 200 mb.

(Courtesy of Joel Susskind and Lena Iredell, NASA/GSFC)

Parameter	Day	Night
Temperature at 500mb		
Effective Cloud Fraction		
Cloud Fraction/Cloud Top Pressure		



Internet

AIRS Data Search and Order at GES DAAC

<http://daac.gsfc.nasa.gov/data/dataset/>

DAAC Search and Order is the interface to all data available at GES DAAC including AIRS data. It enables users to request data efficiently through hierarchical architecture.

DAAC Search and Order - Microsoft Internet Explorer

GES DISC DAAC (GSFC DAAC)

DAAC Search and Order

[NASA Privacy Statement](#), [Web Accessibility Statement](#)

[New User Registration](#) [Update Registration](#) [Order Status](#) [Help](#)


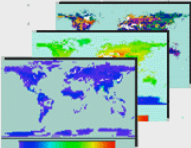
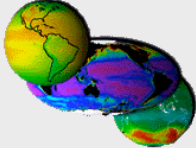
Text Search [Advanced Text Search](#)

Access and Monitoring
This is an U.S. Government Computer System. Users are authorized to use it for search and access of EOSDIS data and services. This access constitutes the users consent to monitoring. Any attempt toward malicious use on this system is prohibited and is punishable by Federal Law.

Data Views

[Data Sets](#) A search of the data archive by data set.

[Disciplines](#) Search for data within various science areas such as meteorology, atmospheric chemistry, land surface, oceanic, cryospheric, biospheric, solar and remote sensing sciences.



AIRS Data Search and Order - Microsoft Internet Explorer

GES DISC DAAC (GSFC DAAC)

AIRS Data Search and Order

[NASA Privacy Statement](#), [Web Accessibility Statement](#)

[New User Registration](#) [Update Registration](#) [Review Order](#) [Cancel Order](#) [Submit Order](#)

[Send Comments](#) [HELP](#)

Text Search [Advanced Text Search](#)

This data set consists of Radiances, Geolocations and Atmosphere products such as temperature, humidity, cloud and ozone derived from the AIRS/AMSU/HSB system, aboard Earth Observing System (EOS) AQUA. The data, generated continuously, has a global coverage obtained twice daily (day and night) on a 1.30pm sun synchronous orbit from a 705-km altitude. For processing convenience, the data is divided into 6-minute granules (the smallest unit of data products).

For more information on the data set, please visit [AIRS Data Support](#)

Data Products	Description	Begin Date	End Date
Nearline Products	Access to AIRS data products stored in GDAAC archive. Data orders over 2 GB should be done through this archive search and order.	2000-12-15 01:59:26	2001-09-18 21:00:00
Online Products	Direct access to anonymous ftp area for retrieval of selected AIRS Level1A, Level1B and Level2 products. Data retrieved in this manner can not be added to the shopping cart of the search and order function.	1998-09-13 03:05:29.000000	2001-09-18 21:00:00

Additional Resources

Visit [AIRS Data Support at DAAC](#) for more information about AIRS Data and Data Services.

AIRS Data Search and Order at GES DAAC

Simple point-and-click navigational web interface shows temporal coverage, number of items, average item size and description of each data product.

- ▼ The links in Data Product column leads users to the list of years in which that product is available.

Data product	Description	Begin Date	End Date	Number of Items	Average Item Size(Kb)
LIB-AIRS-Browse-Subset	AIRS L1B Browse Subset	2000-12-15 01:59:26	2000-12-17 21:59:25	379	762
LIB-AIRS-Rad	AIRS IR geolocated radiances	2000-12-15 01:59:26	2000-12-17 21:59:25	378	123407
LIB-VIS-Rad	VIS geolocated Radiances	2000-12-15 01:59:26	2000-12-17 21:59:25	389	17243
LIB-AMSU-Rad	AMSU-A1 & AMSU-A2 combined, geolocated & calibrated brightness temperature in Kelvin	2000-12-15 01:59:26	2000-12-17 21:59:25	412	463
LIB-HSB-Rad	HSB geolocated & calibrated brightness temperature in Kelvin	2000-12-15 01:59:26	2000-12-17 21:59:25	438	1551

Year	Begin Date	End Date	Number of Items	Average Item Size (kB)
2000	2000-12-15 01:59:26	2000-12-17 21:59:25	378	123407

- ▲ Each link in the Year column below takes you to a calendar where you will be able to make your temporal selection.

AIRS Data Search and Order at GES DAAC

- > Calendar page represents the number of granules available for each day.
- > Spatial search map is regenerated for the selected attribute (i.g. DayNight Flag)

Level 18 AIRS/IR Radiances for 2000 - Microsoft Internet Explorer

File Edit View Favorites Tools Help Links Customize Links Address

Su	Mo	Tu	We	Th	Fr	Sa
						01
02	03	04	05	06	07	08
09	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

OCTOBER

Su	Mo	Tu	We	Th	Fr	Sa
01	02	03	04	05	06	07
08	09	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

NOVEMBER

Su	Mo	Tu	We	Th	Fr	Sa
				01	02	03
04	05	06	07	08	09	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

DECEMBER

378 Data Granules

Su	Mo	Tu	We	Th	Fr	Sa
						01
						02
						03
						04
						05
						06
						07
						08
						09
						10
						11
						12
						13
						14
						15
						16
						17
						18
						19
						20
						21
						22
						23
						24
						25
						26
						27
						28
						29
						30
						31

2000 2000 2000 2000

Temporal Order Option

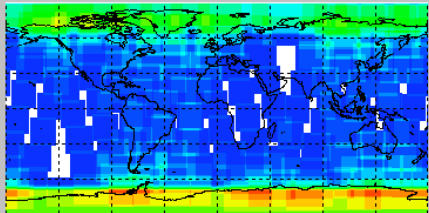
You may order data from a range of days using the [selection boxes](#) below. Please refer to the calendar to identify days with available data.

Start Year: Month: Day: Hour: Min:

End Year: Month: Day: Hour: Min:

AIRS AIRBRAD Data for 2000-DEC-16 - Microsoft Internet Explorer

File Edit View Favorites Tools Help Links Customize Links Address



West Longitude South Latitude

East Longitude North Latitude

Color area

Number of granules per area 1 4 8 12 16

Display no more than items per page.

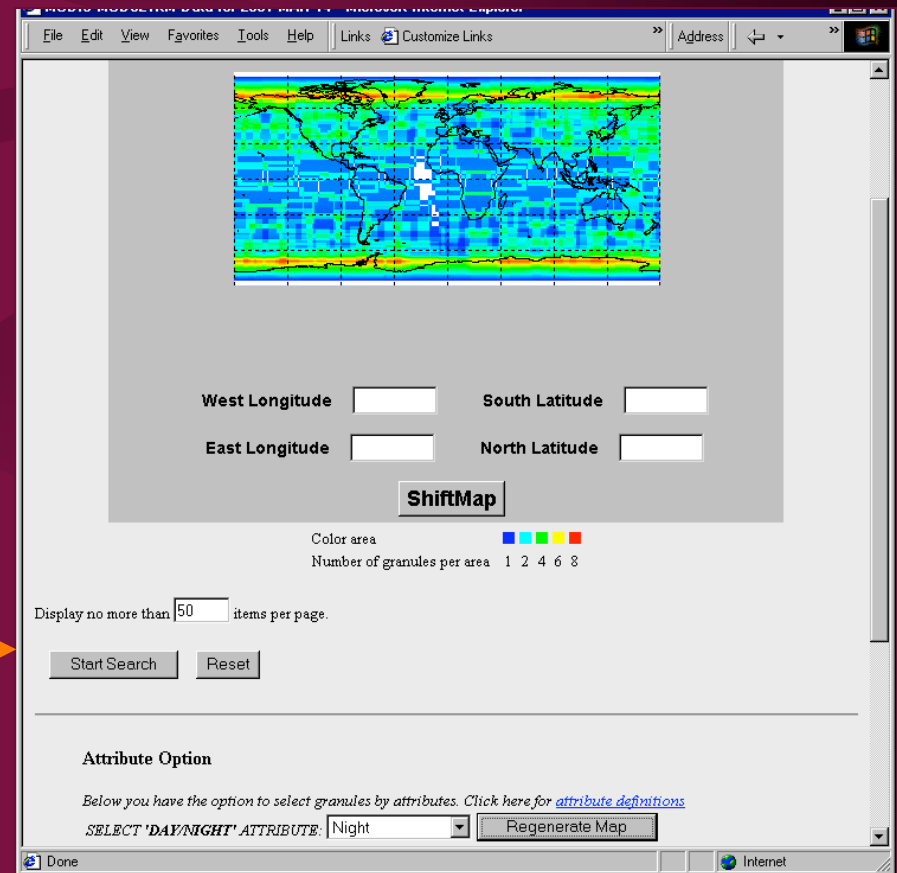
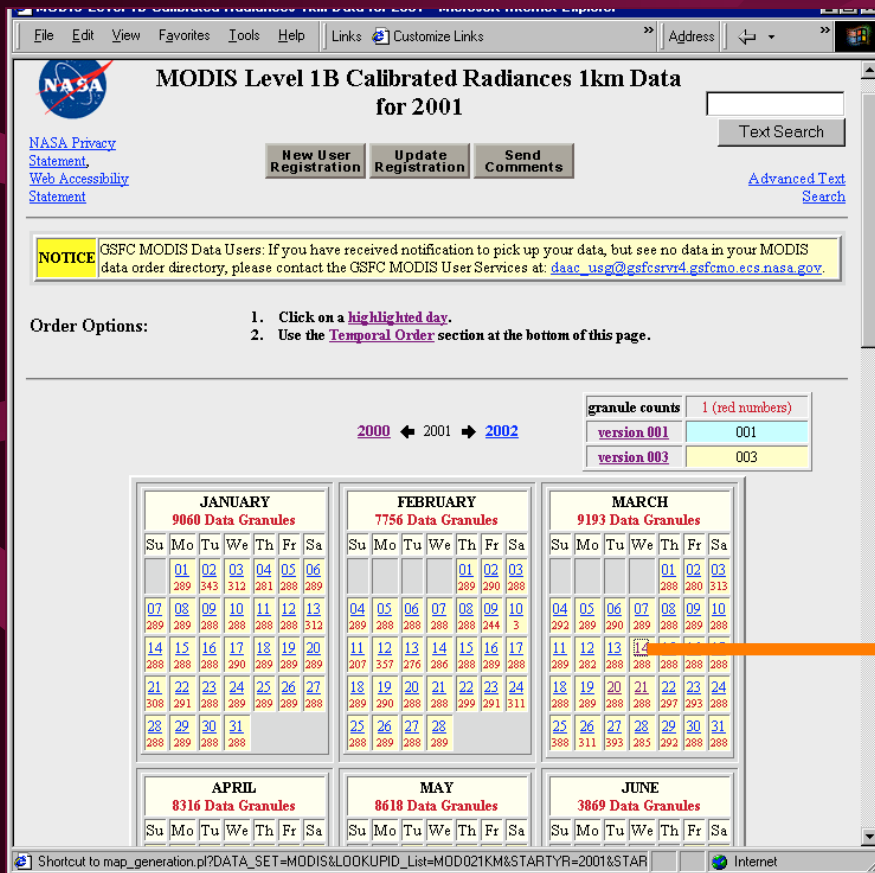
Attribute Option

Below you have the option to select granules by attributes. Click here for [attribute definitions](#)

SELECT 'DAY/NIGHT' ATTRIBUTE:

(Example : MODIS data search and order)

> Select day and attribute to regenerate map and specify spatial range.



Data Search and Order at GES DAAC

> Select granules, output format and channels for on-demand subsetting.

Internet Explorer - Custom Links

File Edit View Favorites Tools Help Links Customize Links

Address

List of Your Search Criteria

DATA_SET: MODIS
PRODUCTS: MOD021KM
SEARCH_TYPES: TimeSearch,RectangularSearch,AttribSearch
START DATE: MAR 14 2001 00:00:00
END DATE: MAR 14 2001 24:00:00
MIN_LON: -117.0
MAX_LON: -80.0
MIN_LAT: 0.0
MAX_LAT: 26.0
MAX_RETURN: 50
Total granules: 7
Total volume: 1000.395 MB

7 granules found for product MOD021KM.
Page 1: items 1 through 7; with volume of 1000.395 MB.

Item ID	Begin Date	End Date	Day/Night Flag	Item Size (KB)	Select to Order
MOD021KM.A2001073.0300.003.2001183130428.hdf	2001-03-14 03:00:00	2001-03-14 03:05:00	Night	146139	<input checked="" type="checkbox"/>
MOD021KM.A2001073.0430.003.2001183140217.hdf	2001-03-14 04:30:00	2001-03-14 04:35:00	Night	146139	<input type="checkbox"/>
MOD021KM.A2001073.0435.003.2001183140221.hdf	2001-03-14 04:35:00	2001-03-14 04:40:00	Night	146858	<input type="checkbox"/>
MOD021KM.A2001073.0440.003.2001183140401.hdf	2001-03-14 04:40:00	2001-03-14 04:45:00	Night	146139	<input type="checkbox"/>
MOD021KM.A2001073.0610.003.2001183133929.hdf	2001-03-14 06:10:00	2001-03-14 06:15:00	Night	146139	<input type="checkbox"/>
MOD021KM.A2001073.0615.003.2001183130021.hdf	2001-03-14 06:15:00	2001-03-14 06:20:00	Night	146858	<input type="checkbox"/>
MOD021KM.A2001073.0620.003.2001183130045.hdf	2001-03-14 06:20:00	2001-03-14 06:25:00	Night	146139	<input type="checkbox"/>

Internet

Internet Explorer - Custom Links

File Edit View Favorites Tools Help Links Customize Links

Address

support JavaScript, contact MODIS User Services (Phone:301-614-5473, Fax: 301-614-5304, daac_usgs@gsfcserver4.gsfc.nasa.gov).

Output format

☒ HDF-EOS ☐ Binary (tarred)

Selection of Bands

Reflected Solar Bands		Emissive Bands	
Aggregated 250 m	Aggregated 500 m	1 km	1 km
<input type="checkbox"/> Band 1 (620-670 nm)	<input type="checkbox"/> Band 3 (459-479 nm)	<input type="checkbox"/> Band 8 (405-420 nm)	<input checked="" type="checkbox"/> Band 20 (3.660-3.840 μ m)
<input type="checkbox"/> Band 2 (841-876 nm)	<input type="checkbox"/> Band 4 (545-565 nm)	<input type="checkbox"/> Band 9 (438-448 nm)	<input checked="" type="checkbox"/> Band 21 (3.929-3.989 μ m)
	<input type="checkbox"/> Band 5 (1230-1250 nm)	<input type="checkbox"/> Band 10 (483-493 nm)	<input checked="" type="checkbox"/> Band 22 (3.939-3.989 μ m)
	<input type="checkbox"/> Band 6 (1628-1652 nm)	<input type="checkbox"/> Band 11 (526-536 nm)	<input checked="" type="checkbox"/> Band 23 (4.020-4.080 μ m)
	<input type="checkbox"/> Band 7 (2105-2155 nm)	<input type="checkbox"/> Band 12 (546-556 nm)	<input checked="" type="checkbox"/> Band 24 (4.433-4.498 μ m)
		<input type="checkbox"/> Band 13L (662-672 nm)	<input checked="" type="checkbox"/> Band 25 (4.482-4.549 μ m)
		<input type="checkbox"/> Band 13H (662-672 nm)	<input checked="" type="checkbox"/> Band 27 (6.535-6.895 μ m)
		<input type="checkbox"/> Band 14L (673-683 nm)	<input checked="" type="checkbox"/> Band 28 (7.175-7.475 μ m)
		<input type="checkbox"/> Band 14H (673-683 nm)	<input checked="" type="checkbox"/> Band 29 (8.400-8.700 μ m)
		<input type="checkbox"/> Band 15 (743-753 nm)	<input checked="" type="checkbox"/> Band 30 (9.580-9.880 μ m)
		<input type="checkbox"/> Band 16 (862-877 nm)	<input checked="" type="checkbox"/> Band 31 (10.780-11.280 μ m)
		<input type="checkbox"/> Band 17 (890-920 nm)	<input checked="" type="checkbox"/> Band 32 (11.770-12.270 μ m)
		<input type="checkbox"/> Band 18 (931-941 nm)	<input checked="" type="checkbox"/> Band 33 (13.185-13.485 μ m)
		<input type="checkbox"/> Band 19 (915-965 nm)	<input checked="" type="checkbox"/> Band 34 (13.485-13.785 μ m)
		<input type="checkbox"/> Band 26 (1.360-1.390 μ m)	<input checked="" type="checkbox"/> Band 35 (13.785-14.085 μ m)
			<input checked="" type="checkbox"/> Band 36 (14.085-14.385 μ m)

Clear Select All Clear Select All Clear Select All Clear Select All

Reset Add Selections To Order

Internet

Data Search and Order at GES DAAC

> Review the selected criteria and user information, and submit order.

Order Creation - Microsoft Internet Explorer

File Edit View Favorites Tools Help Links Customize Links Address

You have selected the following data:

DATA_SET	DESCRIPTION	BEGIN_DATE	END_DATE	NUM_ITEMS	VOL (KB)	ITEM_ID
MODIS	MOD021KM	2001-03-14 03:00:00	2001-03-14 03:05:00	1	146139.0	MOD021KM.A2001073.0300.003.2001183130428

Please indicate how you would like your order to be shipped.

Via network: (FTP) ☒ You will receive email on how to retrieve your order.
OR

On tape: 8MM-8500 ☐ And shipped via: US Mail ☐
Interoffice Mail ☐
Pick Up ☐

Once your order has been created, you will be able to modify it by adding or deleting items. To start over without creating an order, use your browser's Back button.

Create Order

Goddard DAAC Helpdesk: 301-614-5224 or 1-877-794-3147; daacuso@daac.gsfc.nasa.gov
Web Curator: web-curator@daac.gsfc.nasa.gov
NASA official: Steve Kempler, DAAC Manager -- kempler@daac.gsfc.nasa.gov

Done Internet

Verify Order - Microsoft Internet Explorer

File Edit View Favorites Tools Help Links Customize Links Address





User Information

NAME: SURMI CHO
ADDRESS: NASA GSFC/DAAC
Code902
GREENBELT
MD
20771
USA
EMAIL ADDRESS: cho@daac.gsfc.nasa.gov
PHONE: 301-614-5513

Shipping Instructions

Via network: (FTP) ☒ You will receive email on how to retrieve your order.
OR

On tape: 8MM-8500 ☐ And shipped via: US Mail ☐
Interoffice Mail ☐
Pick Up ☐

Done Internet